AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims

1. (Canceled)

2. (Previously presented) The fusion protein of claim 28 having improved biological activity compared to naturally-occurring human erythropoietin.

3. (Previously presented) The fusion protein of claim 28 having an extended serum half-life compared to naturally-occurring human erythropoietin.

4. (Previously presented) The fusion protein of claim 3, wherein said extended serum half-life is greater than 20 hours.

5-15. (Canceled)

16. (Previously presented) The fusion protein of claim 30, comprising a whole Ig molecule.

17. (Previously presented) The fusion protein of claim 30, wherein the Fc portion and the EPO portion are of mammalian origin.

18. (Previously presented) The fusion protein of claim 17, wherein the Fc portion is derived from human IgG.

19-23. (Canceled)

24. (Previously presented) A pharmaceutical composition comprising the fusion protein of claim 30 and a pharmaceutically acceptable carrier, diluent or excipient.

25. (Previously presented) The pharmaceutical composition of claim 24 containing at least one additional pharmaceutically effective drug and / or adjuvants.

26. (Canceled)

27. (Previously presented) The fusion protein of claim 32, wherein the EPO portion comprises at least one of the following mutations: His_{32}→Gly, Ser_{34}→Arg, and Pro_{90}→Ala.

28. (Canceled)

29. (Canceled)

30. (Currently amended) A fusion protein comprising an Fc portion of an Ig molecule and an erythropoietin (EPO) portion, wherein (i) the Fc portion is fused covalently via its C-terminus directly or indirectly to the EPO portion, (ii) the EPO portion comprises a substituted Cys ~~substitution~~ at ~~an amino acid~~ position corresponding to Gln_{86}, Pro_{87}, Trp_{88}, Glu_{89}, or Leu_{91} of human erythropoietin and an amino acid other than Cys at a position corresponding to position 33 of human erythropoietin so that the substituted Cys may form a disulfide bond with a Cys corresponding to position 29 of human erythropoietin, and (iii) the EPO portion retains erythropoietin activity.

31. (Canceled)

32. (Previously presented) The fusion protein of claim 30, wherein the EPO portion is derived from human erythropoietin.

33. (Previously presented) The fusion protein of claim 32, wherein the EPO portion comprises Cys at position 88.

34. (Canceled)

35. (Previously presented) The fusion protein of claim 30, wherein the Fc portion is mutated or truncated in its amino acid sequence.

36. (Previously presented) The fusion protein of claim 30, wherein the Fc portion is modified in its glycosylation pattern.

37. (Previously presented) The fusion protein of claim 30, wherein the Fc portion is derived from an IgG chain and comprises a mutation of the glycosylation site within the Fc portion of the IgG chain.

38. (Previously presented) The fusion protein of claim 37, wherein the mutation is of an asparagine at an amino acid position corresponding to position 297 of IgG1.

39. (Previously presented) The fusion protein of claim 30 further comprising a linker between the Fc portion and the EPO portion.

40. (Previously presented) The fusion protein of claim 39, wherein the linker has no protease cleavage site.

41. (New) The fusion protein of claim 32, wherein the EPO portion comprises the following substitutions: $His_{32}\rightarrow Gly$, $Cys_{33}\rightarrow Pro$, $Trp_{88}\rightarrow Cys$, and $Pro_{90}\rightarrow Ala$.